

September 24, 2001

Mr. Sam Becker, Acting Division Director
Water Quality Protection Division
U.S. EPA Region 6, 6WQ-EW
1445 Ross Avenue
Dallas, TX 75202-2733

RE: Petition to Remove Multiple Parameters as Suspected Causes of Impairment for the
Calcasieu and Ouachita Basins: Louisiana's Court-Ordered § 303(d) List

Dear Mr. Becker:

Attached is a petition to remove selected suspected causes of impairment from Louisiana's Court-Ordered § 303(d) list. These suspected causes are associated with water bodies in the Calcasieu and Ouachita Basins. Data summaries and raw data for each of the water bodies in question are also provided for your review.

It is LDEQ's understanding that your staff will use this information to develop EPA Region 6's request for delisting and subsequent public notice for all of the water bodies presented in the attached petition. Based on conversations with Willie Lane, any modification to this petition will only be done with the agreement of LDEQ. Should EPA deviate from this understanding, LDEQ may elect to go through public notice and formally request delisting based on our own documentation, as was done with previous delisting requests.

If you have any questions concerning these water bodies or the data associated with them please contact Mr. Albert Hindrichs at (225) 765-0246. Thank you for your consideration of this matter.

Sincerely,

Robert P. Hannah, Administrator
Environmental Planning Division

Cc: Willie Lane

RPH:afh

**Petition to Remove Multiple Parameters as Suspected Causes of Impairment for the
Calcasieu and Ouachita Basins:
Louisiana's Court-Ordered § 303(d) List**

Introduction

The Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Assessment hereby requests that multiple suspected causes be removed from Louisiana's Court-Ordered § 303(d) list for Calcasieu and Ouachita Basins. Sampling of these two basins was completed during the year 1999, according to the five-year rotating basin schedule. LDEQ has conducted assessments using this data and found six and sixteen subsegments within the Calcasieu and Ouachita Basins, respectively that should have one of the following suspected causes removed: pathogens, salinity/TDS/chlorides/sulfates, turbidity and pH. Table 1 contains descriptions of each subsegment and the suspected causes that are to be removed from the § 303(d) list. Attached is a disk containing the SAS output file (Appendix A) of the data summaries and assessments of all subsegments located in the Calcasieu and Ouachita Basins, an Excel spreadsheet containing raw conventional data, and an Excel spreadsheet containing raw fecal coliform data.

Description of Calcasieu and Ouachita Basins

The Calcasieu Basin is divided into 39 water quality management subsegments within Louisiana. It stretches east to west from the border with the Mermentau River basin to the border of the Sabine River Basin and north to south from near Kisatchie National Forest to the State Three-Mile Limit of the Gulf of Mexico.

The Ouachita Basin is divided into sixty-one water quality management subsegments within Louisiana. It stretches east to west from the west bank levee of the Mississippi River to the border of the Red River Basin and north to south from the Arkansas-Louisiana State line to the northeastern bank levee of the Red River.

Monitoring and Assessment Methodology

Prior to initiation of the five-year rotating basin schedule not all subsegments within these two basins had fixed Water Quality Network (WQN) sites. Calcasieu and Ouachita Basins were scheduled for sampling in the year 1999 according to the five-year schedule. In 1999 most subsegments without any fixed WQN sites were assigned at least one WQN site. Each site was sampled on a monthly basis during the 1999 sampling period. Sample numbers may vary dependent upon if a sample could be collected on the normal ambient sampling day. Please refer to Table 2 for a list and description of sites for each subsegment.

The Standards, Assessment and Nonpoint Source Section of the Office of Environmental Assessment entered data collected into a FOCUS database on LDEQ's central computer. A SAS program was then utilized to compare numerical data of conventional pollutants for each subsegment to promulgated criteria for each designated use for that water body. No site with a

sample number of less than 5 was used in the assessment program. LDEQ used assessment methods provided in EPA § 305(b) guidance documents. In the case of long-term WQN sites, the most recent five years of data (1996 to 2000) were used in the assessments, as opposed to using only data collected in 1999.

Prior to the initiation of the five-year rotating basin schedule, not all subsegments were assessed using WQN data. In cases where no WQN sites existed, LDEQ's Regional Coordinators provided evaluative assessments using best professional judgment; spill and fish kill data; land use data; and non-fixed site monitoring. A standard checklist and evaluation form were used for all subsegments. Suspected causes and sources of impairment were provided by Regional Coordinators based upon visual inspection of water bodies and knowledge of point source facilities and nonpoint pollution sources in the area. In cases where no numerical criteria are assigned to a water body, LDEQ relies heavily upon the Regional Coordinator's evaluations in order to assess the water body. LDEQ staff has reviewed all evaluative assessments conducted from 1996 to 1998 and has found they support this petition.

Table 1: Delisting matrix for the Calcasieu and Ouachita Basins of Louisiana, specifying subsegments and causes to be removed from the Court Ordered § 303(d) list.

Water body name	Subsegment number	Supports Criteria for Salinity/TDS/ Chlorides/ Sulfates	Supports Criteria for Turbidity	Supports Criteria for Pathogens	Supports Criteria for pH
Calcasieu River Basin Subsegments					
Calcasieu River – Rapides-Allen Parish line to confluence with Marsh Bayou	030103	NOL	Yes	NOL	NOL
Calcasieu River and Ship Channel – Saltwater Barrier to below Moss Lake (Estuarine) (Includes Cool Island and Clooney Island Loops)	030301	NOL	NOL	Yes	NOL
Lake Charles (Estuarine)	030302	NOL	NOL	Yes	NOL
Calcasieu river-Calcasieu Ship Channel below Moss Lake to the Gulf of Mexico (Estuarine) (Includes Monkey Loop)	030401	NOL	NOL	Yes	NOL
Calcasieu Lake (Estuarine)	030402	NOL	NOL	Yes	NOL

Bayou D'Inde – Headwaters to Calcasieu river (Estuarine)	030901	NOL	NOL	Yes	NOL
Ouachita River Basin Subsegments					
Ouachita River – Arkansas State Line to Columbia Lock and Dam (Scenic from Arkansas State Line to intersection with Bayou Bartholomew – 22 miles)	080101	NOL	Yes	NOL	NOL
Bayou Chauvin	080102	NOL	NC	NS	Yes
Bayou de L'Outre – Arkansas State Line to Ouachita River (Scenic)	080501	Yes	NOL	NOL	NOL
Corney Bayou – From Corney Lake to Bayou D'Arbonne Lake (Scenic)	080609	Yes	NOL	NOL	NOL
Middle Fork of Bayou D'Arbonne – From origin to Bayou D'Arbonne Lake (Scenic)	080610	Yes	NS	NS	NOL
Boeuf River – Arkansas State Line to Ouachita River	080901	Yes	NC	NOL	NOL
Big Creek – Headwaters to Boeuf River (including Big Colewa Bayou)	080903	Yes	NC	NOL	NOL
Bayou Lafourche- Near Oakridge to Boeuf River near Columbia	080904	NOL	NC	Yes	NOL
Tensas River – Headwaters to Jonesville (including Tensas Bayou)	081201	Yes	NC	NOL	NOL
Dugdemonia River – From Big Creek to Little River	081402	Yes	NC	NOL	NOL
Castor Creek – Headwaters to Little River	081501	NS	NOL	Yes	NOL
Little River - Confluence of Castor Creek and Dugdemonia River to junction with Bear Creek (Scenic)	081601	Yes	NS	NOL	NOL

Little River – From Bear Creek to Catahoula Lake (Scenic)	081602	Yes	NS	NS	NOL
Catahoula Lake	081603	Yes	NOL	NOL	NOL
Hemphill Creek – Headwaters to Catahoula Lake (includes Hair Creek)	081609	NOL	NOL	Yes	NOL
Bayou Funny Louis	081611	Yes	NC	NOL	NOL

¹Yes = Water body is now fully supporting criteria for this parameter and suspected cause should be removed from Court Ordered § 303(d) list.

²NOL = Not on the Court Ordered § 303(d) list for this parameter.

³NC = No criteria. Criteria for turbidity are not available for all water bodies; therefore, no assessment of the turbidity data could be made at this time.

⁴NS = Not supporting criteria for this parameter; therefore, suspected cause should remain on the Court Ordered § 303(d) list.

Table 2: Water Quality Network site descriptions for Calcasieu and Ouachita Basins in Louisiana.

Subsegment	Site No.	Site Name
030103	0095	Calcasieu River near Kinder, Louisiana
030103	0096	Calcasieu River northwest of Oberlin, Louisiana
030103	0097	Calcasieu River near Oakdale, Louisiana
030301	0027	Calcasieu River near Lake Charles, Louisiana
030302	0822	Lake Charles at the City of Lake Charles, Louisiana
030401	0826	Calcasieu River in Hackberry, Louisiana
030402	0827	Calcasieu Lake west of Hebert's Landing, Louisiana
030901	0094	Bayou D'Inde near Lake Charles, Louisiana
030901	0848	Bayou D'Inde south of Sulphur, Louisiana
080101	0013	Ouachita River at Sterlington, Louisiana
080101	0067	Ouachita River at Monroe, Louisiana
080102	0771	Bayou Chauvin at control structure on Ouachita River Levee N of Monroe, La.
080501	0072	Bayou De L'Outre near Monroe, Louisiana
080501	0324	Bayou De L'Outre north of Farmerville, Louisiana
080609	0015	Little Corney Bayou east of Lillie, Louisiana
080609	0068	Corney Bayou near Lillie, Louisiana
080609	0784	Corney Bayou East of Bernice, Louisiana
080610	0325	Middle Fork Bayou D'Arbonne west of Farmerville, Louisiana
080610	0785	Middle Fork Bayou D'Arbonne northeast of Dubach, Louisiana
080901	0016	Boeuf River near Fort Necessity, Louisiana
080901	0017	Boeuf River west of Oak Grove, Louisiana
080901	0123	Cypress Bayou West of Oak Grove, Louisiana
080901	0327	Boeuf River west of Rayville, Louisiana
080901	0412	Boeuf River near Alto, Louisiana
080903	0069	Big Creek near Winnsboro, Louisiana
080903	0328	Big Creek east of Rayville, Louisiana
080904	0071	Bayou Lafourche Canal near Columbia, Louisiana
080904	0124	Bayou Lafourche Canal near Crew Lake, Louisiana
080904	0128	Galion Canal Southwest of Oak Ridge, Louisiana

080904	0129	Bayou Galion South of Mer Rouge, Louisiana
080904	0795	Staulkinghead Creek (Tisdale Brake), Louisiana
081201	0066	Tensas River at Tendal, Louisiana
081201	0159	Tensas River at Clayton, Louisiana
081201	0331	Tensas River southeast of Winnsboro, Louisiana
081201	0799	Tensas River at Jonesville, Louisiana
081402	0077	Dugdemonia River near Rochelle, Louisiana
081402	0803	Dugdemonia River west of Tullos, Louisiana
081501	0079	Castor Creek near Tullos, Louisiana
081501	0332	Castor Creek west of Columbia, Louisiana
081601	0076	Little River at Rochelle, Louisiana
081601	0808	Little River east of Georgetown, Louisiana
081602	0025	Little River south of Rogers, Louisiana
081602	0089	Little River southwest of Jena, Louisiana
081602	0809	Little River northeast of Ball, Louisiana
081603	0810	Catahoula Lake east of Big Point, Louisiana
081609	0816	Hemphill Creek east of Nebo, Louisiana
081611	0818	Bayou Funny Louis southwest of Searcy, Louisiana

Justification for Removal of Pathogens as a Suspected Cause of Impairment for Subsegments 030301, 030302, 030401, 030402, 030901, 080904, 081501, and 081609

Pathogen indicators are a primary parameter used in the assessment of Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), and Shellfish Propagation (SFP). LDEQ Surveillance staff samples each water body on a monthly basis and transports them to the Louisiana Health and Hospital's (LDHH) laboratory for analysis. LDHH reports the results to LDEQ in terms of fecal coliform MPN/100 mL. All samples taken between January 1996 and December 2000 were used in this assessment. As noted in Table 3, LDEQ is requesting five subsegments in the Cakasiu Basin and three

subsegments in the Ouachita Basin be removed from EPA's Court-Ordered § 303(d) list for pathogens.

The PCR criterion for fecal coliform is 400 MPN/100 mL during the swimming season (May through October) and for SCR it is 2,000 MPN/100 mL year-round. Therefore, only samples taken during the swimming season are used for PCR assessment. A water bodies PCR or SCR is considered impaired for pathogen indicators if greater than 25% of the samples do not meet the respective PCR and SCR criteria. The DWS criterion (pre-treatment) is 2,000 MPN/100 mL year-round. DWS use is considered impaired if more than 30% of samples exceed the criterion. The SFP criterion is 43 MPN/100 mL year-round. SFP use is considered impaired if more than 25% of samples exceed the criterion. Subsegments with more than one sample site are considered impaired if only one site does not meet the criterion.

Table 3: Summary of subsegments LDEQ has determined are fully supporting fecal coliform criteria and are, therefore, subject to removal from the Court-Ordered § 303(d) list for pathogens.

Subsegment	Designated Use	Number of Observations	Min	Max	Criteria	% Exceedance
030301	PCR	13	20	5000	400	15.4
	SCR	29	20	5000	2000	10.3
030302	PCR	6	7	170	400	0
	SCR	11	7	300	2000	0
030401	PCR	6	2	50	400	0
	SCR	11	2	1600	2000	0
030402	PCR	6	2	8	400	0
	SCR	11	2	500	2000	0
030901–Site 0094	PCR	13	20	900	400	15.4
030901-Site 0848	SCR	27	20	2400	2000	7.4
	PCR	6	8	500	400	16.7
	SCR	12	8	1600	2000	0
080904–Site 0071	PCR	11	2	170	400	0
080904-Site 0124	SCR	25	2	5000	2000	4
	PCR	7	13	240	400	0
	SCR	15	13	2400	2000	6.7
080904-Site 0795	PCR	6	23	140	400	0
	SCR	12	4	16000	2000	8.3
081501-Site 0079	PCR	17	2	300	400	0
	SCR	38	2	1600	2000	0
081501-Site 0332	PCR	7	30	340	400	0
	SCR	15	30	9000	2000	6.7
081609–Site 0816	PCR	6	80	16000	400	16.7
	SCR	12	80	16000	2000	16.7

Justification for the Removal of Salinity/TDS/Chlorides/Sulfates as a Suspected Cause of Impairment for Subsegments 080501, 080609, 080610, 080901, 080903, 081201, 081402, 081601, 081602, 081603, and 081611

Salinity/TDS/chlorides/sulfates are a group of parameters that, although assessed individually, are grouped together in terms of impairment on EPA's Court-ordered § 303(d) list. Salinity, TDS, chlorides, and sulfates are secondary parameters that are indicative of Fish and Wildlife Propagation (FWP). A water body is considered impaired if greater than 30% of the samples for one or more of these parameters exceed the designated criteria. No criterion for salinity exists; however, salinity related problems have never been reported for these subsegments. All data collected between January 1996 and December 2000 were compared to the designated criteria for the subsegments listed in Table 4. Based upon these assessments, LDEQ requests eleven subsegments in the Ouachita Basin be removed from EPA's Court-Ordered § 303(d) list for salinity/TDS/chlorides/sulfates. Please refer to Appendix A for the data summaries and assessments of subsegments: 080501, 080609, 080610, 080901, 080903, 081201, 081402, 081601, 081602, 081603, and 081611.

Table 4: Summary of subsegments LDEQ has determined are fully supporting salinity/TDS/chloride/sulfate criteria and are, therefore, subject to removal from the Court-Ordered § 303(d) list for pathogens.

Subsegment	Designated Use	No. Observations	Min	Max	Criteria	% Exceedance
TDS Results						
080501-Site 0072	FWP	27	36	284	500	0
-Site 0324		15	90	348	500	0
080609-Site 0015	FWP	15	52	224	300	0
-Site 0068		15	56	208	300	0
-Site 0784		12	14	87.8	300	0
080610-Site 0325	FWP	15	14	192	200	0
-Site 0785		12	69	202	200	8.3
080901-Site 0016	FWP	25	100	824	430	24
-Site 0017		14	172	526	430	7.1
-Site 0327		15	88	320	430	0
080903-Site 0069	FWP	26	98	776	635	7.7
-Site 0328		15	54	412	635	0
081201-Site 0066	FWP	14	212	464	500	0
-Site 0159		44	108	404	500	0
-Site 0331		14	164	368	500	0
-Site 0799		12	140	380	500	0
081402-Site 0077	FWP	29	64	762	2000	0
-Site 0803		12	128	973	2000	0
081601-Site 0076	FWP	28	74	474	1000	0
-Site 0808		12	108	902	1000	0
081602-Site 0025	FWP	29	48	286	260	3.4
-Site 0089		28	56	316	260	10.6
-Site 0809		11	30	234	260	0
081603-Site 0810	FWP	11	42	246	260	0
081611-Site 0818	FWP	12	26.1	222	260	0
Sulfate Results						
080501-Site 0072	FWP	27	2.5	93.1	45	14.8
-Site 0324		15	7	54.8	45	6.7
080609-Site 0015	FWP	15	1.6	12.5	25	0
-Site 0068		15	1.7	22	25	0
-Site 0784		12	1.3	5.9	25	0
080610-Site 0325	FWP	15	3.5	18	15	13.3
-Site 0785		12	3.8	10.5	15	0
080901-Site 0016	FWP	25	2.1	61.4	45	4
-Site 0017		14	4.3	38.1	45	0
-Site 0327		15	2.6	20.2	45	0

080903-Site 0069 -Site 0328	FWP	26 15	1.3 1.7	33.8 66	75 75	0 0
081201-Site 0066 -Site 0159 -Site 0331 -Site 0799	FWP	14 44 14 12	2.9 2.1 2.9 1.9	32.6 29.4 16.3 24.7	30 30 30 30	7.1 0 0 0
081402-Site 0077 -Site 0803	FWP	29 12	10.3 14.9	324 99	750 750	0 0
081601-Site 0076 -Site 0808	FWP	28 12	5.2 8.2	128 353	500 500	0 0
081602-Site 0025 -Site 0089 -Site 0809	FWP	29 27 11	7.5 7.7 1.3	63.5 64 33.6	75 75 75	0 0 0
081603-Site 0810	FWP	11	3.6	23.2	75	0
081611-Site 0818	FWP	12	3.1	11.1	75	0
Chlride Results						
080501-Site 0072 -Site 0324	FWP	27 15	4.8 17.7	88.5 122	250 250	0 0
080609-Site 0015 -Site 0068 -Site 0784	FWP	15 15 12	15.8 10.8 3.6	88.3 61.3 27.1	160 160 160	0 0 0
080610-Site 0325 -Site 0785	FWP	15 12	4.4 6.9	23.5 20.6	50 50	0 0
080901-Site 0016 -Site 0017 -Site 0327	FWP	25 14 15	4 6.9 4.5	338 167 31.3	105 105 105	24 14.3 0
080903-Site 0069 -Site 0328	FWP	26 15	1.1 1	254 56.4	230 230	7.7 0
081201-Site 0066 -Site 0159 -Site 0331 -Site 0799	FWP	14 44 14 12	1.8 1.9 1.4 1.6	41.7 73.9 56.1 39.3	45 45 45 45	0 18.2 7.1 0
081402-Site 0077 -Site 0803	FWP	29 12	3.2 7	35.1 43.4	250 250	0 0
081601-Site 0076 -Site 0808	FWP	28 12	2.9 6.4	111 154	250 250	0 0
081602-Site 0025 -Site 0089 -Site 0809	FWP	29 27 11	3.2 3.2 2.2	57.8 122 62.5	50 50 50	6.9 22.2 9.1
081603-Site 0810	FWP	11	5.7	29.4	50	0
081611-Site 0818	FWP	12	3.1	35.3	50	0

Justification for the Removal of Turbidity as a Suspected Cause of Impairment for Subsegments 030103 and 080101

Turbidity is the primary parameter indicative of the support of Outstanding Natural Resources (ONR) and a secondary parameter indicative of FWP for selected water bodies in Louisiana. Not all subsegments in Louisiana have been assigned numeric turbidity criteria. Water bodies that are designated as an ONR are considered impaired if greater than 10% of the samples exceed the numerical criterion of 25 Nephelometric Turbidity Units (NTU). All other water bodies for which numerical criteria have been assigned are considered impaired for turbidity if greater than 30% of the samples do not meet the specified criterion. All data collected between January 1996 and December 2000 were used in this assessment. Based upon assessments of water bodies with numerical criterion (Table 5), LDEQ is requesting one subsegment in the Calcasieu Basin and one subsegment in the Ouachita Basin have turbidity removed as a suspected cause of impairment on EPA's Court-Ordered § 303(d) list.

Table 5: Summary of subsegments LDEQ has determined are fully supporting turbidity criteria and are, therefore, subject to removal from the Court-Ordered § 303(d) list for turbidity.

Subsegment	Designated Use	No. Observations	Min	Max	Criteria	% Exceedence
030103	FWP/ONR	41	6	50	50	0
080101-Site 0013	FWP	60	7	123	50	5
080101-Site 0067	FWP	29	6.5	110	50	3.4
080101-Site 0770	FWP	11	6.4	65	50	9.1

Justification for the Removal of pH as a Suspected Cause of Impairment for Subsegment 080102

pH is secondary parameter used for protection of FWP. The criteria consist of a maximum and a minimum value. A water body is considered impaired if greater than 30% of the samples fall above or below the stated maximum and minimum criteria. All data collected between January 1996 and December 2000 were compared to the designated criteria. A review of the data revealed Bayou Chauvin (080102) is meeting the designated criteria, as displayed in Table 6.

Table 6: Summary of subsegments LDEQ has determined are fully supporting pH criteria and are, therefore, subject to removal from the Court-Ordered § 303(d) list for pH.

Subsegment	No. Observations	Min	Max	Criteria	% Exceedence
080102	12	6.6	8.4	Low = 6 High = 8.5	0 0

Conclusions

Review of all available ambient sample data for the Calcasieu and Ouachita Basins found that twenty-two subsegments are meeting criteria for one or more of the suspected causes targeted in EPA's Court-Ordered § 303(d) list. The Calcasieu and Ouachita Basins were fully assessed by LDEQ in April 2000 and these assessments were submitted to EPA in the form of the 2000 §

305(b) Report. Supporting data and documentation are provided on the disk accompanying this petition.

LDEQ's former monitoring strategy, which covered only a few water bodies in a basin on a long-term basis, did not provide adequate data with which to assess all water bodies in the Calcasieu and Ouachita Basins. Therefore, many water bodies were placed on the § 303(d) list with insufficient data. Based upon new data collected during 1999, it is LDEQ's position that the twenty-two subsegments described in this petition be removed from the Court Ordered § 303(d) list for the suspected causes identified in Table 1.